

MEMORANDUM

DATE: June 27, 2011

TO: Chip Humphrey and Kristine Koch, USEPA

FROM: Ronald French, Todd King, Susan Penoyar CDM

SUBJECT: Rough Meeting Notes-FS- Key Elements of Check-In

Please find below our draft notes taken at the recent FS Check-in Meeting held on June 21 and 22, 2011 at the Sheraton Hotel near the Portland Airport. We will refine these notes after our follow up conference call scheduled for June 28 based on your direction. If you need additional clarification, please do not hesitate to give us a call.

- 1) Introduction of participants on phone and in the room.
- 2) Victor Magar from Environ was introduced by Carl Stivers.
- 3) Victor has been involved with an internal review of the FS for LWG. Panel was set up in June 2010 to review and provide senior level guidance and peer review. His presentation was about 20 minutes long.
 - a) Panel Review Team members:
 - i) Mike Palermo- Retired ACOE Engineering, working for Port of Portland
 - ii) Steve Nadeau- Lawyer, Director for SMWG
 - iii) Richard Wenning- Environ, Toxicologist
 - b) The panel will review the technical work products. Evaluate FS for consistency to EPA Superfund Guidance. Looked at 2005 Guidance, Pages 3-16, 7-3, 3-2, 7-1, 7-2, 7-3 (RAOs), 3-14, 4-12, 7-2 (time frame); Key issues from Victor are:
 - i) Source Control
 - ii) No presumed remedy
 - iii) Combination remedies
 - iv) Remedy effectiveness and permanence
 - c) Discussion on how the FS goals are to be achieved by LWG.

- i) Risk Management using Remedial Action Levels (RALs), which are not clean up levels or PRGs – the RALs are used to estimate the achievement of Risk Reduction Objectives.
 - ii) Ensuring RALs and benthic toxicity approach is consistent with national trends
- 4) Work products from the review panel will not be available for public or agency review.
- 5) Jim Anderson pointed out Adaptive Management is prominent in EPA guidance, but Victor indicated that this wasn't really considered as part of the FS (at least from Victor's view).
- 6) DRAFT FS KEY ELEMENTS CHECK IN PRESENTATION- by Carl Stivers
 - a) The focus of the June 21 and 22 meeting is discussing the description of the Alternatives not conducting a detailed evaluation of the Alternatives.
 - b) Need to identify over the next two days how we would identify what constitutes a "substantial" change in the FS while it is being drafted.
- 7) RALs Process-Clay/Carl
 - a) RALs are what you can achieve in the short-term, "with construction equipment in a fixed time period."
 - b) Provide a range of risk reduction approaches, engineering perspective- where do you get the biggest bang for the buck, how long does it take to get there and what happens over time?
 - c) T=10, T=20, and T=30 in the graphs are model predictions based upon Contaminant Fate Model.
 - d) It would be nice to have background concentrations (line depiction) for selected chemicals on the slides.
 - e) How did LWG come up with the graphs for individual river miles? Using specific data for a given river mile using the same process for site-wide analysis. Some river miles will show rapid recovery after construction and some won't.
 - f) Not proposing AOPC specific RALs, with the focus on SMAs and sub-SMAs.
 - g) PAHs are impacting the lower parts of the river and can be seen beginning at river mile 7.5.
 - h) The PAH PRGs are based upon different exposure assumptions at 10^{-4} or 10^{-5}
 - i) RALs will not be specifically developed for specific technologies.

8) Graph showing Sediment Chemical Temporal Trends (Surface vs. Deep) from January MNR presentation (PCBs, DDx) as one line of evidence (LOE).

9) RALs Relationship to PRGs Presentation- Carl S.

- a) LWG attempted to develop RALs for each contaminant EPA gave a PRG for, but in the end only identified RALs for selected chemicals.
- b) Need to show more detail regarding if we clean up for selected chemicals, we will remediate a certain amount of for other chemicals (e.g. arsenic).
- c) Tributyl Tin (TBT) dietary risk number still under review in the risk assessment, not totally excluded from evaluation yet.
- d) Have developed risk estimates for PBDEs, no PRGs due to lack of co-located samples.

10) AOPC Coverage Refinement Presentation-Amanda

- a) The AOPC boundaries were refined based upon new data and the final PRGs for selected chemicals.
- b) Average density of the samples in the navigation channel was use to determine the buffer distance for the AOPC.
- c) Alternative B- looked closely of the distribution of the chemicals as determining areas of benthic risks (MQ<0.7).
- d) The replacement value is the PRG in time zero. Results in a range of hilltop values.
- e) Range in volume estimates- RALs vs Hilltopping.
- f) How do you assign disposal sites - Independent consideration for each of the alternative?
- g) Different areas might need different levels of capping material. Cap design for the FS doesn't have to be detailed at this point.

11) Looking at each of the SMAs-Carl

- a) Swan Island CDF has more capacity than T-4. Swan Island has a capacity of 1.5 million cubic yards.
- b) The short-term water quality "site-wide Vol/days exceeding criterion" is looking closely at the volume of area exceeding WQ criterion. This would show the amount of water that exceeds the water quality standard for the Willamette River.

12) Discussions Points and Areas of Concern for the Agency Team

- a) Protectiveness- We need to discuss more what we would like to see in the range of acceptable years (10,15,20,25,30) that would identify when fish tissue levels would meet a particular target.
- b) Need to evaluate to see how the other chemicals overlay the four primary contaminants being evaluated.
- c) Should have a discussion on Long Term Monitoring costs. EPA considers short term monitoring until reach RAOs – then go into LTM to be sure site is staying protective
- d) Need a more robust assessment of MNR for each site.
- e) FS still needs to provide a basis for “everything else”. What are our expectations for addressing MNR in the Draft FS.
- f) Need to address areas of high concentration that are above the SWAC. Hotspots removal?
- g) Need to be cognizant of LWG’s concern about making them do extra which could extend the schedule.
- h) Evaluation of background levels vs. fish tissue concentrations in the study area.
- i) More of a discussion on the site-wide AOPC for remediation of complete site to a specific level is needed in the FS.
- j) Need to provide LWG a clear expectation on what we want to see in the FS.
- k) Is the over-dredge (1-2 feet) being proposed by LWG too much - should it be consistent with other mega-sites. Kristine identified numerous sites with over-dredge depths of six inches. Karl K. had a discussion with M. Palermo on the phone regarding this, and he thought 1-2 feet was pretty liberal. However the over-dredge depth may be based upon the type dredging equipment used (i.e. hydraulic vs. mechanical).
- l) DDE vs. DDX. Why did we settle on DDE?
- m) Are we okay with RALs being proposed for the selected chemicals, and the time frames they propose for risk reduction? What are we willing to leave on site?
- n) Is LWG going to recommend the “preferred” alternative?
- o) What is the acceptable risk at T=O from the agency standpoint? How long with EPA allow to reach the desired risk?
- p) Jim A - Whole idea no FS study for outside an SMA (it’s just going to be MNR). Look at areas outside an SMA. Where is the rigorous analysis of MNR.

- q) Jim A - Consideration of hot spots outside of an SMA. How is this going to be addressed in the FS?
- r) Jim A - Over reliance on the fate and transport model for predicting the blue, red and green curves. Have 5-year old data, so should be able to check if it's matching the model. Model may show that it will be all reducing within 15 years – does recent and current data agree? Need sensitivity analysis? How will they present the alternatives, for instance, what if we reduce the over dredge to 1 foot in cost estimate?
- s) Jim A-Trying to get around DEQ's definition of treatment when they are looking at "in-situ". Are they trying to jam capping in a treatment remedy?
- t) Jim A - Fish tissue, it would really help to get trend analysis going now. Need to start LTM program before remedy is implemented.
- u) Jim A - If we have buried sediment that is high at lower depths, with material below and RAL on top, what will they do with those sites.
- v) Erin - There is a concern about the mitigation costs being used. Are the costs too high on a per acre basis? Some representatives from the tribal community thought the \$2M/acre was very high based upon their experience for restoration work in the study area. Aware of project in the \$100K to 200K range. No consideration was given in LWG's estimate for acquisition of property for restoration or replacement. Most FSs have not considered mitigation an FS cost.
- w) What is the basis for filling in a dredged hole vs. laying back a bank?

13) Methods for Volume Determinations Using RALs for Each Alternative-Amanda

- a) What were the characteristics of the core- using only cores that had selected chemicals. No minimum depth for analysis. LWG considered the entire core for determining depth for remediation and RAL acreages.
- b) Average depth of impact is around 5-8 feet site wide. Dredging is not limited to the area of the SWAC.
- c) John - Figure 2 sketch showing core depths, estimated dredging depths. Kristine: in Duwamish using six inches as depth for over-dredge. LWG folks say the 1-2 feet is usual for mega sites, and that six inches is very tight.
- d) Need to get a copy of the volume estimate spreadsheets. Have agency request from LWG. May want to do some independent estimates.
- e) Long Term Monitoring and institutional control costs were looked at on a site wide basis, not by AOPC or SMA. What happens if monitor and it's not recovering naturally?

- f) SMAs - do we need to go back to look at the structures, independent evaluation of structural and qualitative value in case they have contamination between, and we want to remove or replace?

14) Mitigation Costs Method Description Presentation - Valerie

- a) Differences in on-site disposal costs vs. off-site disposal costs.
- b) The cost for on-site mitigation was based upon work in Portland Harbor by the City, for restoration projects identified in the North Reach Plan. Malek- Did you factor in an acquisition costs? Acquisition costs are not included in this estimate.
- c) Need to look at NRDA restoration potential in the future.
- d) Restoration costs should be based upon restoration within the impacted watershed. There will be maps in the FS showing potential restoration sites within the watershed.
- e) Restoration assumes laying back the banks to create shallow water habitat (for on-site restoration).

15) Carl Stiver's thoughts on packaging of where they are moving forward. Basic idea is to first develop the alternatives, compare to the seven criteria, do that on an individual basis for each alternative and/or combination of alternatives. After that evaluation, the next step is to complete the analysis of alternatives (costing) and begin writing the FS text.

16) EPA's PCB Background Mapping- Carl

- a) Those areas in the navigational channel that are above background will be used in developing the SWAC.
- b) It is estimated that during the working season you could dredge about 200,000 to 300,000 cy per year.
- c) Chip - would eMNR get you to your RAO goals quicker than MNR?

17) Two agency working sessions were conducted during the two days, and the meeting ended with an Agency Team/LWG management meeting.

18) Follow Up Data Requests Proposed to LWG:

- a) Data - FS database with core location, depth, lab results, etc. and brief description of data added or removed from RI database with rationale.
- b) Data - Volume estimate spreadsheets from presentation
- c) GIS - AOPC, SMA and sub SMA (with DV types) polygons as currently proposed by LWG

- d) GIS- Theiseen and sub-Theissen polygons used in volume/cost assessments
- e) GIS-Bathymetry – all interpolated and raw data collected
- f) GIS-Surface sediment model grid mesh as GIS layer
- g) GIS-Navigation channel with permitted depths
- h) Sediment surface shear force and/or velocities at worst case (peak, peak day, peak month, peak year) and modeled average conditions